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ABSTRACT

A study was undertaken to explore how elementary school children employ help seeking as a means of problem solving in the classroom. High-, average-, and low-ability students at the first-, third-, and fifth-grade levels were targeted for in-depth observation. A "focal-child" observational procedure was used to gather data on naturally occurring help-seeking interactions in the classroom. When a targeted child initiated interaction with a teacher or another child--intending to solicit aid, information, or materials pertinent to the task at hand--observers coded critical features of the episode on the observation form (i.e., the target of the bid for assistance, the type of help requested, responses to the request, and the activity structure in which the interaction occurred). Overall, children's rates of help seeking were higher in math than in reading. Boys and girls differed by rates of help seeking and by type of help requested. Children of different ability levels were found to vary not only in rate of help seeking and type of help requested, but also in the type of responses elicited from their helper choices. (Implications of these findings for children's achievement, learning, and social adjustment in the classroom are discussed.) (MP)

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Help-Seeking in Elementary Classrooms:

An Observational Study

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Help-seeking in elementary classrooms:

An observational study

Over the past two decades there has been a surge of interest in the social processes operating within primary and secondary school settings. This interest can be attributed partly to a growing appreciation on the part of educators for the importance of the affective outcomes of education including what children learn about relating to others, what social values they acquire, and attitudes they retain after the years of schooling. Social processes in the classroom are also important to study because they are believed to influence educational outcomes such as the types of learning strategies acquired if not also the level of academic achievement attained by students. Of the many social skills a child can employ to cope with learning situations, one of the most important is the ability to obtain help from adults and peers when it is needed (Anderson & Messick, 1974). The extent to which children are successful in utilizing others as resources is a reflection of children's ability to detect and communicate their needs and the responsiveness of the social environment to the expression of these needs.

Given the necessity for understanding the social processes and skills which promote favorable educational outcomes, the failure to investigate children's help-seeking in educational settings can be seen as a glaring omission. Perhaps because help-seeking has long been confounded with dependency both in the adult psychological literature (Cotler, Quilty & Palmer, 1970) and in studies of child development (Fischer & Torney, 1976; Zaffy, Note 1), it has taken a long time for behavioral scientists to recognize that help-seeking can be a positive,

adaptive skill that is critical for learning. Whatever the reasons for this neglect, this study represents a step toward understanding children's help-seeking and reevaluating the function of help-seeking in the school context.

Help-seeking may arise from different underlying motives depending on the child and the task situation. The child's goal in seeking help may be merely to complete a task without comprehension or mastery as an objective, to avoid criticism from an agent of evaluation, or to avoid the task altogether. Help-seeking may, however, serve a far more constructive purpose, such as enhancing the child's own competence. We therefore underscore a distinction between "executive help-seeking and "instrumental" help-seeking proposed by Nelson-Le Gall (1981).

Executive help-seeking refers to those instances in which the child's intention is to have someone else solve a problem or attain a goal on his or her behalf. Some problems encountered by children undoubtably call for executive help-seeking, but continued reliance on others to provide more help than is needed would be detrimental to the development of independent mastery. Instrumental help-seeking refers to those instances in which the help requested is limited to the amount and type needed to allow children to solve problems or attain goals for themselves. Children with effective help-seeking skills are able to refuse help when they can perform a task by themselves, yet, can obtain help when it is needed (Murphy, 1962). Our work proceeds from the assumption that help-seeking comprises a set of social and cognitive behavior fundamental to learning. Help-seeking is viewed as a means used by children to supplement their own material resources, understanding, and expertise in the service of problem-solving and goal pursuit.

The child who lacks help-seeking skills is seen as hampered in learning by not being able to take the initiative to supplement personal resources when necessary for problem-solving (Nelson-Le Gall, Gumerman & Scott-Jones, 1983). In formal classroom situations, students must learn to monitor their own task performance and attempt to deal with difficulties or problems because the teacher in a large classroom cannot always perform this function for them. To receive assistance, students must realize that help is needed and must know how to obtain it. In classrooms, help-seeking episodes may be found in formal student-to-teacher bids for assistance as well as in informal peer interactions. Naturalistic observations of peer interactions in problem-solving situations suggest that help-seeking is a frequent occurrence (e.g., Cooper, Marquis, & Ayers-Lopez, 1982). Cooper et al found that, in a random sampling of peer instructional interactions in the classroom, the majority were learner initiated (i.e., a child asked for the help of a peer). Furthermore, the requested help was more likely to be for academic or problem-relevant information than for social attention.

Help-seeking skills should also be considered as fundamental to the attainment of expertise. It is sometimes assumed that children who ask for help are not competent because they are not solving a problem by themselves (Nakamura & Finck, 1980). Children, however, are not able to solve many problems alone; indeed, they might be thought of as universal novices (Brown, 1982). Therefore, seeking out a competent person for aid or advice may represent a more adaptive approach to solving a difficult problem than abandoning it or persisting unsuccessfully without help. Thus, a child who seeks help is showing initiative. Teachers of elementary school children tend to believe that

children who seek help are more goal-oriented and more involved in the learning process than children who give up easily, or wait for others to offer them help (Nelson-Le Gall & Scott-Jones, Note 2). The importance of active help-seeking for learning and skill acquisition has been demonstrated directly by Webb (1980) in a study of problem-solving in small groups. Analyzing the verbal interaction of high school students solving a difficult mathematics problem, Webb found that achievement of individual group members, measured in terms of successful solution of similar post-test problems, was greatest for those students who were active explainers and for those who were active solicitors of explanations.

Differences exist in classroom learning environments, and these differences have clear and demonstrated implications for students' social and academic outcomes (Bossert, 1979). Classroom learning environments may differentially promote adaptive help-seeking skills in children. Until recently, the effects of classroom structure were conceptualized and studied most frequently by typing classrooms as either "open" or "traditional". This global classification was made by grouping classrooms with respect to their relative standing along any of a myriad of instructional and physical classroom dimensions of organization. Marshall (1981) has argued that educational research employing classroom structure as a variable should focus on specifying the relationship between component dimensions of classroom structure and specific student outcomes, such as task persistence or independence. When instrumental help-seeking is viewed as a mediator of motivational outcomes like task persistence and independence, an examination of specific components of classroom structure, such as ability grouping, task organization, and access to multiple instructional agents, appears

warranted.

To date, little research has been conducted on the effects of student diversity, in terms of ability, motivation, etc., on help-seeking behavior in various classroom learning environments. Several studies (e.g., Peterson, 1981; Webb, 1980) have found that high ability students give more help to other students than do low ability students in small group learning contexts, but the relationship between student ability and receiving help is not as clear. What is needed for clarification of the relationship between student ability and receipt of help is a distinction between help given that is needed and not needed, as well as between solicited and unsolicited help. Furthermore, the studies need to distinguish the nature of the help received as either executive help (an answer without explanation of the problem-solving process) or instrumental help (explanations of process).

The present study was undertaken to explore how elementary school children employ help-seeking as a means of problem-solving in the classroom. Naturalistic observations were made of boys and girls of different ability levels at the first, third, and fifth grade levels. Data were collected on children's choices of helpers, the type of help sought (i.e., instrumental or executive) and the responses to these requests. In order to provide information on the social and physical structure of learning contexts, data on different activity structures in math and reading classes, and on the sociometric status were also gathered.

Method

Observational Setting

Class Descriptions. The first-grade math class had one teacher and 25 students. The class was divided into 2 unequally sized groups on the basis of ability for teaching purposes. The smaller of the two groups was comprised of high-ability children; the larger group contained average-, and low-ability children. The teacher apportioned her time equally between the two groups. For example, she might instruct the high-ability students at a large work table by the chalkboard while the other group was engaged in seatwork at their desks. Whenever children in one of the groups were involved in individual seatwork, they were supposed to work independently and quietly. The teacher discouraged the children from talking among themselves and also from interrupting her while she was involved with the other group.

The teacher for the first-grade math class also taught the third-grade math class. The class of 26 children was organized in much the same way although the two ability groupings contained almost equal numbers of children.

The 25 members of the fifth-grade math class were 75% fifth-graders and 25% sixth-graders. The teacher often worked with the entire class as a group but sometimes divided the class into smaller groups for teacher-directed board work, textbook assignments, taped lessons and accompanying worksheets, and a variety of math teaching aids. The board work activities involved a large group of children working very close to one another and presented many opportunities for children to examine each other's work. Although the teacher stated that she supported the children working with each other, especially low-ability children, the children were reprimanded for talking with each other.

The first-grade reading class had 25 children. The teacher held three basic reading groups, comprised of high-, average-, and low-ability children, respectively. The teacher planned to allot equal time to each group. Behavior management problems involving children outside of the group with which she was meeting, however, frequently called the teacher away from a reading group unexpectedly. In the instances when the teacher left the group, she assigned a group member to take charge in her absence. That child was then the resource for the other children in the group who needed any help. The teacher allowed talking among the children, but only as long as they were relatively quiet. The desks in the classroom were grouped into rows of four and the physical closeness was conducive to frequent interaction.

The 26 members of the third-grade reading class were divided into two groups. The smaller group was comprised of high-ability children who frequently sat together at a work table for all reading activities regardless of the teacher's presence. The other group, which made up the bulk of the class, almost always sat at individual desks grouped in rows of six. The teacher discouraged any interaction among children for any reason, and was generally available as a resource for the larger group except when she was conducting a specific lesson with the small group at the work table. At such times, children from the large group had to either wait for intervention, or ask neighboring students for help, and thereby, risk being reprimanded for talking in class.

The participants from the fifth grade were members of two different reading classes: one with 23 students, and one with 25 students. Both groups met with the same teacher, but at separate time periods. The classroom for the fifth-grade reading students had only 3 large work tables; so the group sitting at each table was generally engaged in the

same activities. The teacher toured systematically among groups. In the teacher's absence, a "table captain," who had been previously appointed, was available to answer the questions of other group members. Interaction among members of the group was condoned by the teacher, as long as the interaction pertained to the assignment.

Observed Task Activity Structures. The activity structures of children's lessons were identified so that the effect of the instructional context on help-seeking could be examined. Like Bossert(1979), we identified three primary activity structures, however, the only mutual structures were RECITATION and CLASS TASK. RECITATION is a activity structure that is characterized by high levels of teacher direction and control of student activity. The activity involves the whole class or a large group of children in a single task. The teacher usually controls the flow of questions and answers (Bossert, 1979, p. 44). In the CLASSTASK activity structure, the teacher is in a supervisory role and the students are engaged in previously assigned activities, i.e., work sheets, workbook pages, tests, or other activities that lend themselves to children working individually or in small groups without continuous teacher intervention. We identified a third activity structure, RECITATION-TASK, during our initial visits to participating classrooms. The activity structure had characteristics of RECITATION in that the teacher was in a directorial role, however, the students were active participants in the specific task directed by the teacher. The interaction during these activities was spontaneous, often initiated by the teacher, but sometimes by the students. Examples of this activity structure were students working as a group at the board, flash card and bingo activities, and games such as "Simon Sez." This activity structure was observed in classrooms at all grade levels in

math and in reading. In appearance, this activity structure also differs from RECITATION in that it is less formal than a lecture or a question/answer activity where the students may appear somewhat passive. Aside from observed involvement in these activity structures, nearly all of the children, were at times, involved in TRANSITIONAL activity. This activity is characterized by children preparing for a lesson or cleaning up after an activity. The scheduling of specific reading and math activities was solely at the teacher's discretion. Therefore, the frequency of occurrences and sequencing of activity structures in reading and math classes could vary from teacher to teacher.

Data Collection

Subjects. A focal-child observational procedure was used to gather data on naturally occurring help-seeking interactions in the classroom. Ten students in math class and ten students in reading classes at the first-, third-, and fifth-grade levels were targeted for observation. Teachers identified the targeted children for the study on the basis of in-class performance and standardized achievement test scores. The targeted children comprise three ability groups for each class, 4 high-ability students, 4 low-ability students, and 2 average-ability students, with equal numbers of boys and girls. The children were observed in reading and math classes at a local parochial school serving a primarily working-class population.

Observational codes. When a target child initiated interaction with a teacher or another child, intended to solicit aid, information or materials pertinent to the task at hand, observers coded critical features of the episode on the observation form. The activity structure of the lesson, the target of the bid, the type of help requested, and the responses to the request were coded. The codes for type of help and

responses to requests are summarized in Table 1.

Insert Table 1 about here

Observer Training and Reliability. Seven data collectors underwent a training period in which they learned to use the codes on the observational instrument that describe help-seeking behavior. At a nearby school which served as a pilot setting, data collectors then practiced using the observational instrument until interrater reliability was at least 90%. Prior to actual data collection, the trained data collectors spent time as visitors in the participating classrooms in order to desensitize the children to the presence of observers. Data collectors were not informed of the ability levels of the students they observed or of the specific purposes of the study. Coder reliability, assessed between trained and experienced data collectors was maintained within a range of 91% to 100% throughout the duration of classroom observations.

Observational Procedures. One hundred minutes of data on each targeted student in the class were collected in 10-minute segments randomly sampled over a six-week period. Observations were made only when the regular classroom techer was present. Observers followed the activity of a single focal child during the observation segment by using an event sampling technique. Observation of the given interaction continued until the interaction sequence terminated or was interrupted. Observers maintained a distance close enough to enable them to view the child's behaviors and to hear any verbalizations without being intrusive or disturbing the child. Observers did not intervene in the child's activities or respond to any bids for help.

Results

The total number of help-seeking interactions initiated by our targeted population was 493. Of that number, 55.78% occurred in math and 44.22% occurred in reading. This pattern held across grade levels; that is, at each grade level more help-seeking requests were initiated in math than in reading.

Because activity structures were expected to influence help-seeking activity, differences in the amount of instructional time students spent in the various activity structures might represent differential opportunity to seek help. In Table 2 are the mean percentages of time spent in different activity structures collapsed across grade, sex and ability. The task structure in which children experienced most of their instructional activity in reading and math at all grade levels was CLASSTASK. Children spent much less time in RECITATION and RECITATION-TASK than in CLASSTASK.

Insert Table 2 about here

In order to take into account any differential exposure to the various activity structures, the data were converted from frequencies to rates expressing the frequency of occurrence of help-seeking per minute. Children's rates of help-seeking were then examined within the context of the different activity structures. As can be seen in Table 3 children's overall rate of help-seeking was highest in CLASSTASK, the activity structure in which they spent the most time. The overall rate of help-seeking in the RECITATION-TASK activity structure was second highest; the help-seeking rate in RECITATION was much lower than that of the other activity structures. A one-way repeated measures analysis

of variance (ANOVA) was performed on the mean rates of help-seeking for the three instructional activity structures. Because there was some overlap in the class rosters for reading and math, separate analyses were conducted for these classes. This separation is maintained for reporting findings throughout the Results section. The differences in rate of help-seeking among activity structures was statistically significant in math, $F(2,28) = 5.26$, $p < .01$, and in reading, $F(2,28) = 13.21$, $p < .0001$.

Children's rates of help-seeking in math were higher than their rates in reading in every activity structure. In spite of the fact that children spent most of their instructional time in math in CLASSTASK structures, children's rate of help-seeking in math was highest in the RECITATION-TASK structure. Children's help-seeking rates in different activity structures in reading corresponded more directly with the time the children spent in each activity structure.

Insert Table 3 about here

Individual differences in help-seeking rates

As this study was an initial exploratory one, we were not able to include a large enough sample of children to give us adequate power to examine interactions among sex, grade, and ability group as variables. Thus, prefaced with the caveat that interactions among these factors might account for significant proportions of variance in the data had the design been more powerful, we would like, nevertheless, to present some interesting differences between boys and girls, and between children of different ability levels that were observed. Observed sex, ability, and grade differences in the patterns of help-seeking rates

between children are reported separately for math and reading below.

Sex. A comparison of the help-seeking rates of boys and girls in math and reading suggest girls are more likely than boys to seek help. This sex difference is consistent with previous findings (e.g., DePaulo, 1978; Fischer, & Torney, 1976). The percentage of time boys and girls spent in all activity structures was very similar, but there were sex differences in the rates of help-seeking (See Table 4). The rates for girls are higher than those for boys in RECITATION-TASK and CLASSTASK in both math and reading, however, in RECITATION activities, boys' help-seeking rates were higher than those of girls in both subject areas. These differences, however, did not attain statistical significance (all F's < 1).

Insert Table 4 about here

Ability. The overall rate for the low-ability children in math was almost three times that of average- and high-ability children (see Table 5). This difference in help-seeking rates by ability was statistically significant, $F(2,27) = 5.00$, $p < .02$. In math, the average- and high-ability groups spent 63% and 64% (respectively) of their instructional time in CLASSTASK, while the low-ability group spent only 51% of their time in that task structure, The help-seeking rate of low-ability students in CLASSTASK, however, was nearly four times that of the other ability groups in this activity structure. In RECITATION-TASK, the high, and especially low ability children had high rates of help-seeking. In contrast, the average ability children exhibited no help-seeking behavior in this task structure. In the RECITATION activity structure, once again, the low-ability children had

the highest rate of help-seeking, but help-seeking rates were less variable across ability groups in RECITATION than in the other activity structures.

In reading classes, the overall rate of help-seeking for average-ability children was higher than that of low-, or high-ability children. This difference approached but did not reach statistical significance, $F(2,27) = 2.76$, $p < .10$ This pattern held across activity structures (see Table 5). The rate of help-seeking was highest in the CLASSTASK structure for all ability groups, especially average-ability children, and the rates were lowest for all ability groups in the RECITATION activity structure.

Insert Table 5 about here

Grade. Fifth-graders sought help more frequently (mean rate = .15) than did first- (mean rate = .06) and third-graders (mean rate = .06) in their math classes. This effect of grade on help-seeking rates in math, approached, but did not reach, statistical significance, $F(2,27) = 2.55$, $p < .10$. Activity structure effected help-seeking rates differentially at different grade levels. Whereas first-graders sought help more frequently in CLASSTASK activities than in other activity structures, third- and fifth-graders sought help more in RECITATION-TASK structures than in other activity structures, $F(4,54) = 3.75$, $p < .01$. In reading classes, help-seeking rates did not show the same increase across grade levels. First-graders were observed to seek help more frequently (mean rate = .06) than fifth-graders (mean rate = .05) who sought help more than third-graders (mean rate = .02). This difference fell just short of statistical significance, $F(2,27) = 3.20$, $p < .06$.

Targets of Help-Seeking Requests

There were three possible sources to which the help-seeking requests were directed, the teacher (or other classroom adult), peers, or impersonal sources. Of the three possible sources in both subject areas, children utilized impersonal sources less often than they did teachers or peers (see Figure 1). In math, there was a trend towards increasing use of impersonal help sources (i.e., number lines, times table charts, metric conversion tables) with increasing grade level. Children's referral to impersonal sources (i.e., alphabet posters, dictionaries, and other word reference books) in reading revealed no such trend. Overall, teachers were targeted by children as help sources more often than impersonal sources. In math, first- and third-grade children directed between 30% and 50% of their request for help to teachers, whereas, the fifth graders solicited teachers' help less than 10% of the time. The same was true for all grade levels in reading. Peers were the source most often targeted by children seeking help. This is especially evident among fifth-graders in math, who targeted peers for 80% of all their requests. To a lesser degree, this was also true for the first- and third-grade children. Again, this pattern was also true for reading.

Insert Figure 1 about here

Responses to Help-Seeking Requests

The responses children received to their request depended to some degree on the helper targeted and the type of help requested of the helper. Specific categories for responses to children's requests included receiving the type of help that was requested, receiving some

help but not what was asked for, receiving non-competent help, being referred to someone or something else, being ignored, or being rejected. Children of all ability levels were more successful in obtaining the type of help requested from peers than from teachers in both math and reading classes. There were, however, differences in the amount of successful help-seeking episodes by student ability in math and reading. These differences are discussed below.

Math The high-, and low-ability children were more successful in getting help from teachers and peers than their average-ability counterparts (see Table 6). In addition, whereas, help-seeking requests of average-ability children were ignored nearly 40% of the time, help-seeking requests of low-, and high-ability children were ignored an average of only 10% of the time.

Reading. The average-ability children were least successful of all ability groups in soliciting the type of help they requested from teachers, and the low-ability children were the least successful of all ability groups in getting the type of help requested from peers (See Table 6). The low-, and the average-ability children were rejected in their requests to helper sources 7.59% and 14.55%, respectively, whereas, the high-ability children were rejected only 1.72% of the time.

Insert Table 6 about here

Help-Seekers' Responses to Unsuccessful Bids for Help

In order to examine children's persistent use of help-seeking as a problem-solving strategy, we examined all cases of reattempts to seek help after nonsuccessful attempts. The measure of persistence in help-seeking (Persistence Index: PI) was expressed as a ratio derived

by dividing the number of reattempts made by a child after a failed attempt by the total number of nonsuccessful attempts. A child who made a reattempt after every unsuccessful attempt would have a persistence index of 1.00; a child who never made such reattempts would have a score of 0. One-third of all target children made reattempts after an unsuccessful attempt to procure help. High-ability children demonstrated more persistence in seeking help than low-ability children (PI = .93 vs .49) with average-ability children (PI = .66) showing intermediate levels of persistence.

Types of Successful Help-Seeking Events

A child who received the type of help that was requested was considered to have been involved in a successful help-seeking event. Three types of successful help-seeking events were examined in more detail. These three are instrumental-content requests, executive-content requests, and executive-procedural requests. Instrumental-procedural helping events were not included in the data analysis because of their low frequency of occurrence (total frequency = 4).

Instrumental-Content Help. Instrumental-content events occurred in both math and reading. In both subject areas, children chose peers more frequently than they chose teachers as a help source for this type of help. In math, more than three-fourths of these requests were initiated by girls. In reading, the opposite was true. There were twice as many requests from boys than there were from girls for this type of help. Therefore, these results show that girls most frequently requested help that was either explanatory or that which involves a process to enhance their understanding of problems in math; and, in reading, boys most frequently sought this type of help.

An examination of help-seeking episodes of this type for different ability status differences indicates that average-ability children targeted the teacher more frequently than other groups, especially in reading. Perhaps one reason the average-ability children most frequently chose teachers as targets is that they were usually grouped with the low-ability children in math and reading, and therefore, the teacher would seem to be their most likely source of instrument-content help.

Executive-content help. For all successful executive-content requests occurring in both subject areas, peers were approached more frequently than teachers, even more so than they were approached for instrumental-content requests. The results show that boys initiated over half of the executive-content requests in math. In reading, girls sought executive-content help more than twice as often as did boys. It appears then that in math, boys most frequently requested "answer only" help or information that confirmed an answer, and in reading, girls most frequently sought this type of help.

We found that the average-ability children, more frequently than high- and low-ability children, asked teachers for executive-content help in math. High- and especially low-ability children directed most of their requests for executive-content help to peers. As previously mentioned, the average-ability children were generally grouped with the low-ability children for instructional purposes. Since the average-ability group did request and receive executive-content help from peers more frequently than they did instrumental-content help, it can be speculated that either average students were depending on other average- or low-ability children within their groups for executive-content help, or were more willing to cross instructional

group lines for help. It may be that since executive-content help requires only a short answer or shake of the head from the helper source, the average-ability children could cross instructional grouping lines without risking reprimands from the teacher.

Executive-procedural help. Requests for executive-procedural help were also most frequently directed to peers than to teachers. In math, girls, as compared to boys, initiated over half of the requests of this type. In reading, however, boys initiated almost two-thirds of the requests for this type of help as compared to the one-third initiated by girls.

In math, it was the children of low-ability status that made almost all of the executive-procedural requests to teachers and peers. In fact, the average-ability children made no such requests and the high-ability children made only two requests. In reading, requests for this type of help were almost two times more frequent than such requests in math. The average-ability children, more frequently than children of other ability levels, requested this type of help from the teacher. Children of all ability levels targeted peers as help sources for this type of help.

Discussion

The goal of this study was to begin to provide answers to the following basic questions about children's help-seeking behavior in the classroom: What are the characteristics (e.g.,ability, sex, achievement orientation) of children who seek help? To whom do they turn for help? What type of help is sought? How does classroom structure affect these behaviors? The findings of the present study suggest, as we expected, that individual differences and classroom learning contexts make important contributions to children's employment of help-seeking as a

problem-solving strategy in the classroom.

Although the sex differences observed in help-seeking rates were not statistically significant, it is interesting to speculate about the impact of the observed sex differences in help-seeking on teachers' perceptions of conduct problems as the source of boys' poor classroom performance (e.g., Brophy & Good, 1974; Dweck, Davidson, Nelson, & Enna, 1978). We observed that boys more frequently than girls seek help under circumstances in which the teacher is giving directions, explaining concepts of a lesson, or leading a formal class discussion. In addition, over 50% of all help-seeking interactions initiated by boys in math and reading in this activity structure were directed to peers. Given the fact that RECITATION activities are characterized by tighter teacher control of interaction, boys risk negative teacher sanctions by disrupting activities to solicit help from peers. In contrast, girls' rates of help-seeking are higher than boys under those circumstances in which children are most often working independently (CLASSTASK), and in those lessons which the teacher directs, but the children are active participants (RECITATION-TASK). Girls who requested help during RECITATION activities most often directed these requests to the teacher.

The finding of sex differences in requests for instrumental-content help is particularly interesting in light of the general stereotyping of math as a masculine skill domain and reading as a feminine skill domain. The data suggest that children were more likely to request instrumental help with substantive content in the subject area in which their sex group is stereotypically less competent. The finding for executive-content requests is opposite that reported for the instrumental-content requests. Boys sought more executive help with the substance of math lessons and girls sought more executive help with

reading lessons.

Findings from this study also revealed differential rates of help-seeking among high-, average-, and low-ability students. One might have expected that rate of help-seeking would be negatively related to skill level, i.e., that low-ability children would generally seek help most often, and high-ability children least often. Our data does not support this view. We found, instead, different patterns of help-seeking among children of different ability levels for math and reading. In math, the rank order of ability groups in terms of help-seeking rates was low, high, then average. In reading, however, average-ability students sought help most frequently, followed in order by the low-ability and then high-ability students.

Most students were more successful than not in their bids to seek help. Interestingly, however, the help-seeking bids of average-ability students are ignored and rejected more frequently than those initiated by low- and high-ability students. Furthermore, average-ability students received fewer unsolicited offers of help from peers and teachers than their low- and high-ability counterparts. These findings are compatible with those of Webb (1980) and Peterson (1981), yet at present no conclusive interpretation can be offered. More research is required to advance our understanding of the effects of classroom structure on learning outcomes for these students.

One possible explanation for the average-ability student's lack of success concerns children's choice of helpers. Although it was observed that students, in general, sought help more often from peers than from teachers, average-ability students were more likely than other students to target the teacher as the helper source. They often initiated such requests by raising their hands regardless of the immediate availability

of the teacher. If the teacher did not respond to their raised hands, the children usually did one of several things: a) Kept their hands raised and waited (sometimes several minutes) for intervention, even though the teacher may have stipulated that if she was working with another group, she would be unable to answer other children's questions. b) Interrupted the teacher; this option, however, increased the risk of being reprimanded. c) Resorted to requesting help from a peer after having targeted the teacher as a helper source. d) Gave up and started to do something else having been unsuccessful in gaining attention from the teacher and unsuccessful in attaining help from a peer.

Children sometimes avoided the problems that might arise in attempts to solicit help from another person by consulting impersonal sources for help, or by copying a peer's work without the peer's awareness. Acts of copying were picked up by the observational codes as requests for executive-content help. Copying appeared to serve a number of functions: self-check to confirm the proper arrangement of a problem to be worked, self-check after a problem is worked to confirm the answer, copying an answer from a neighboring student to bypass working a problem. The first two categories of copying may be seen as effective problem-solving strategies that demonstrate the child's own involvement in the learning process through help-seeking. Surprisingly, average-ability children did not use copying often as a vehicle for procuring help from peers. Of all requests to peers, low-ability children copied 44.26% of the time, high-ability children copied 31% of the time, and average-ability children only 8.88% of the time. This lack of copying by average-ability children along with the higher failure rate of their help-seeking attempts in general, may indicate that these children are experiencing a form of academic and/or social

isolation from the mainstream of the instructional exchanges in the classroom.

Grade differences did occur in the help-seeking behavior of children observed. These differences, however, reflect more than just developmental differences in the component processes and skills involved in help-seeking (see Nelson-Le Gall, et al, 1983 for a detailed discussion of these skills). Grade differences could result from variation in the classroom environment due to such factors as social norms, class composition, and teacher management styles. For these reasons, the observed grade differences are generally difficult to interpret. For instance, one observed grade difference involved higher rates of help-seeking in fifth grade math than in the math classes at the lower grades. The behavior of the fifth graders is most interesting because although math teachers at all grade levels imposed strict sanctions against unauthorized peer interactions and generally discouraged peer exchanges, the fifth graders more so than younger children managed to obtain help from their peers via direct requests and also by copying.

Our results do suggest that teachers need to consider the effect of activity structure on their own and students' behavior. For instance, pupils who need help are less likely to receive it in RECITATION. If a teacher relies heavily on this structure, then poorer students may suffer needlessly. This is not to say that teachers should not use RECITATION. That would be contrary to other research (see review by Brophy, 1979) demonstrating its relationship to achievement. Rather, when dealing with a group of less able children the teacher may want to counteract this tendency by reducing the amount of time spent in whole groups or take precautions that these children receive adequate

attention in small groups or seatwork. Restricting the number and availability of legitimate learning resources in the classroom may leave some children little choice other than to copy the work of a nearby classmate. Since copying behavior tends to be more covert than instrumental help-seeking, teachers have less information to use in judging the instructional value of the event and thus, often punish children caught copying. A system encouraging the use of alternative resources when the teacher is unavailable, such as that used in the fifth-grade reading classroom, seems to be an effective solution to the problem of copying and high percentages of children's help-seeking requests being ignored.

As pointed out earlier in this paper, there are several limitations to the data presented. Although we have almost two hours of observational data on each target, the sample size is not as large as we would have desired. More children in a large sample of classrooms should be studied. In addition, average students were underrepresented in our sample and would need to be included in larger numbers in future studies to better assess the generalization of some of the present findings suggesting their relative isolation from instructional exchanges in the classroom. We also focused only on the helping interaction from the help-seeker's point of view and did not collect supporting data on help-giving and help-using. We view the significance and contribution of this study as resting in its potential for spurring further research in the area. We issue a strong caveat to those in the educational community who might want to accept some of the tentative, yet provocative, findings presented without additional support from further studies. More research, extending and replicating findings of the present study, must be undertaken before clear implications for the

classroom can be drawn.

In conclusion, it seems clear that help-seeking, far from being an innate disposition, involves complex skills that are learned through observation, experimentation, and practice and whose acquisition depend on the development of related aspects of social understanding and opportunities to seek help. From this perspective, it becomes clear that teachers and those responsible for structuring the environments in which children grow and learn must be concerned with children's acquisition of help-seeking capacities. In order to decide which educational methods are best suited to elicit appropriate help-seeking, educators should know what help-seeking knowledge and strategies are available to boys and girls of various ages, ability levels, ethnic and social-class backgrounds. We will also need to know more about the effects of classroom social norms, such as those emphasizing working alone, not disturbing others, and not talking to classmates, on help-seeking activity. Clarification of the specific situations to which the norms apply, the teachers enforcement of the norms, children's interpretations of the norms, as well as the norms themselves are needed. Such knowledge should be useful to the classroom teacher who desires to maximize the achievement of students of all ability levels.

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Table 1

Observational Codes for Help-seeking Requests

Type of Help Requests:

A. Instrumental-Content:	The help-seeker requests an explanation of process (how to obtain the solution) from the helper, not an answer, and the information sought is substantive or curricular in nature. "Should we answer the questions at the end of the story?" or "Will you show me how to multiply fractions?"
B. Executive-Content:	The help-seeker is requesting an answer to a question or problem, without an accompayning explanation, and the information sought is curricular in nature. "What is 14 x 3?" or "How do you spell dinosaur?"
c. Instrumental-Procedural:	The help-seeker is requesting an explanation of procedure from the helper, and the help sought has only to do with the 'mechanics' of classroom activity.

Table 1 (continued)

	"Can you show me how we're supposed to fold our papers?" or "Would you help me find my pencil?"
D. Executive-Procedural:	The help-seeker is requesting an answer or solution to a problem that has only to do with the 'mechanics' of classroom activity. "Let me use your eraser." or "Get a dictionary for me."
Responses:	
A. Same Type Help Requested/Received:	The target provides the exact information requested by the help-seeker.
B. Some Help Provided:	The target provides some help or assistance, but not the type that was requested.
C. Not Competent:	The target acknowledges the request for help, attempts to help, but is unable to help. "I don't know the answer to that."
D. Referral:	The target acknowledges the request for help but refers the help-seeker to another source. "I'm not that far yet, ask Marie, she's

Table 1 (continued)

	finished the assignment."
E. Ignore:	The target ignores the help-seeker's request.
F. Rejection:	The target acknowledges the request for help, but opts not to help. "Don't ask me, I'm not going to help you."

Table 2

Mean Percentage of Time Spent in Activity Structures and Transition

	Activity Structures			
	RECITATION	RECITATION-TASK	CLASSTASK	TRANSITION
Subject Area				
Math	19.203	17.243	58.600	4.950
Reading	12.486	16.110	62.236	9.165
Marginals	15.844	16.676	60.418	7.057

Table 3

Mean Help-Seeking Rates for Activity Structures in Math and Reading

	Activity Structures			
	RECITATION	RECITATION-TASK	CLASSTASK	MARGINALS
Subject Area				
Math	.029	.122	.118	.090
Reading	.015	.033	.086	.045
Marginals	.022	.077	.102	

Table 4

Mean Help-Seeking Rates of Children in Math and Reading

By Activity Structure and Sex

Math

	Activity Structures			
	RECITATION	RECITATION-TASK	CLASSTASK	MARGINALS
Sex				
Male	.037	.116	.090	.081
Female	.020	.127	.145	.097

Reading

	Activity Structures			
	RECITATION	RECITATION-TASK	CLASSTASK	MARGINALS
Sex				
Male	.018	.017	.083	.081
Female	.011	.048	.090	.050

Table 5

Mean Help-Seeking Rates of Children in Math and Reading

By Activity Structure and Ability

Math

	Activity Structures			
	RECITATION	RECITATION-TASK	CLASSTASK	MARGINALS
Ability				
Low	.039	.206	.210	.152
Average	.030	.000	.057	.029
High	.018	.098	.055	.057
Marginals	.029	.122	.118	

Reading

	Activity Structures			
	RECITATION	RECITATION-TASK	CLASSTASK	MARGINALS
Ability				
Low	.010	.036	.090	.045
Average	.048	.056	.108	.071
High	.003	.017	.072	.031
Marginals	.015	.033	.086	

Table 6

Percentages of Successful Help-Seeking Episodes

In Math and Reading by Student Ability Level and Helper Source

Math

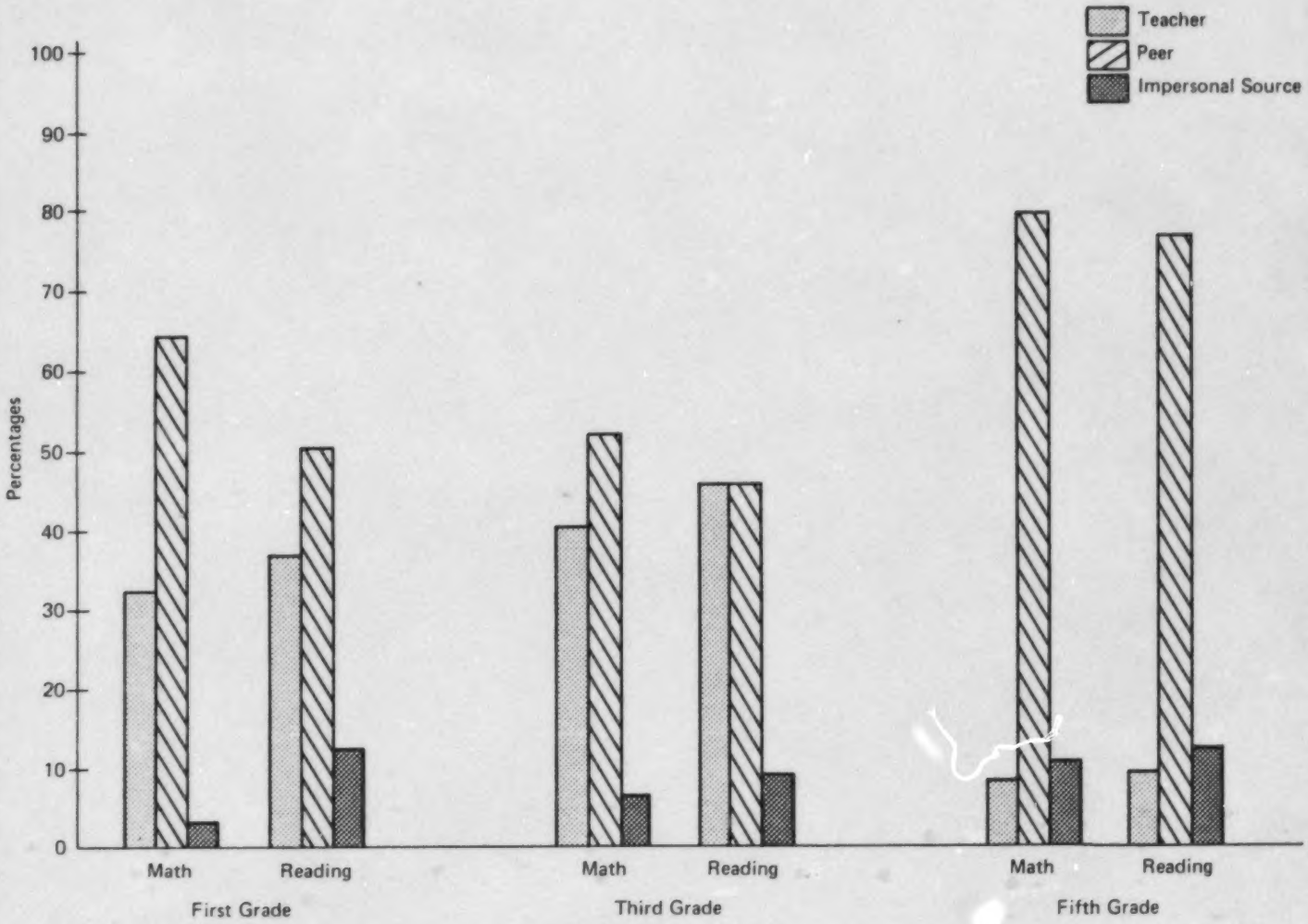
	Ability Level		
	Low	Average	High
Helper Source			
Teacher	44.83	35.0	53.33
Peer	91.12	75.0	89.58
Marginals	82.35	46.43	80.95

Reading

	Ability Level		
	Low	Average	High
Helper Source			
Teacher	53.13	33.64	44.44
Peer	65.96	72.22	79.59
Marginals	60.75	60.0	74.14

Figure Caption

Figure 1: Percentages of help-seeking requests directed to help sources by subject area and grade level.


Teacher
Peer
Impersonal Source
100
90
80
70
60
50
40
30
20
10
0
Percentages
Math
Reading
Math
Reading
Math
Reading
First Grade
Third Grade
Fifth Grade